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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,770	10/03/2005	Biao Jiang	37137-224303	4403

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VENABLE LLP
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EXAMINER

DAVIS, BRIAN J

ART UNIT	PAPER NUMBER
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1621

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,770	Applicant(s) JIANG ET AL.	
	Examiner Brian J. Davis	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 1-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/3/05;4/25/06</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

References AB, AC and AD listed on the 10/3/05 IDS have been lined-through because they have not been provided. These references, cited in the Search Report, have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action.

Specification

The disclosure is objected to because of the following informalities: the specification is replete with egregious grammatical errors, for instance, on page 1, line 16 ("...has [been] approved..."). Appropriate correction is required.

Claim Objections

Claims 1-21 are objected to because of the following informalities: the claims are replete with egregious grammatical errors, for instance, in claim 1 line, 3 ("...where Y is H, [a] mono or multisubstituted..."). Some claims also contain multiple periods, others none at all. Claims must begin with a capital letter and end with a period. MPEP 608.01(m). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The definitions of R⁵ and R⁶ are unclear when they are not OH and H, respectively.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 13

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recites the broad recitation "...THF, dioxane, [etc.]...", and the claim also recites "...one preferred solvent is toluene...", which is the narrower statement of the range/limitation.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The exact meaning of the variable R^4 is unclear because it is undefined.

Claims 2-12 and 14 are also rejected under 35 USC 112, second paragraph, as claims which depend from indefinite claims are also indefinite. *Ex parte Cordova*, 10 USPQ 2d 1949, 1952 (PTO Bd. App. 1989).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Acta Chimica Academiae Scientiarum Hungaricae* (1975), 84(4), p. 471-5 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Reactive Polymers, Ion Exchangers, Sorbents* (1985), 3(4), p. 315-26 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Journal of the American Chemical Society* (1990), 112(19), p. 7032-41 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Tetrahedron* (1994), 50(13), p. 3929-42 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Chirality* (1995), 7(7), p. 499-504 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Chemistry Letters* (1994), 10, p. 1777-80 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Helvetica Chimica Acta* (1998), 81(10), 1803-1814 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Journal of Organic Chemistry* (1998), 63(5), 1709-1713 (abstract). The reference teaches applicant's compound(s).

Claims 16 and 19-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by *Tetrahedron Letters* (1999), 40(27), 5071-5072 (abstract). The reference teaches applicant's compound(s).

Allowable Subject Matter

The subject matter of claims 1-15 would be allowable once the objections and 112, second paragraph rejections outlined above have been overcome. Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art appears to be WO01/707 A2, cited by applicant in the IDS, which teaches the asymmetric synthesis of quinazolin-2-ones useful as HIV reverse transcriptase inhibitors (page 2, line 20). The cited prior art neither teaches nor suggests the instant synthesis, however (specifically, the use of chiral (1R,2R)-2-N,N-

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substituted-1-(substituted phenyl)-2-R³-substituted-2-aminoethanol ligands in the presence of Zn and Cu salts). Nor would it have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of the prior art in order to arrive at those of the instant invention. There is no motivation to do so.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 5,932,726 is cited to show related processes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Davis whose telephone number is 571-272-0638. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne (Bonnie) Eyler can be reached at 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 **BRIAN DAVIS
PRIMARY EXAMINER**

Brian J. Davis
June 11, 2007